

What is claimed is:

1. An equipment operable to receive and operate on AC and DC input power, comprising:
  - an AC distribution system which is operable to receive and distribute AC input power;
- 5 a DC distribution system which is operable to receive and distribute DC input power;
  - one or more AC/DC converters operable to receive AC input power from the AC distribution system and to produce one or more first DC outputs;
  - one or more DC/DC converters operable to receive DC input power
- 10 from the DC distribution system and to produce one or more second DC outputs; and
  - an output combining element operable to couple at least one of the one or more first DC outputs and the one or more second DC outputs to a load.
2. The equipment of claim 1, wherein the AC distribution system provides power to converters which provide one or more DC outputs to the equipment.
3. The equipment of claim 1, wherein the DC distribution system provides power to converters which provide one or more DC outputs to the equipment.
4. The equipment of claim 1, wherein the AC distribution system for the AC input power comprises conditioning for the AC input power.
5. The equipment of claim 1, wherein the DC distribution system for the DC input power comprises conditioning for the DC input power.
6. The equipment of claim 1, wherein the output combining element comprises diode combining of one or more of AC/DC, DC/DC, and AC/DC and DC/DC converter outputs.
7. The equipment of claim 1, wherein the output combining element comprises active or passive elements.

8. The equipment of claim 1, wherein the output combining element comprises load sharing between converters.
9. The equipment of claim 1, wherein the output combining element comprises inputs from one or more redundant converters.
10. The equipment of claim 1, wherein the output combining element includes communications with one or more processors internal or external to the output combining element.
11. The equipment of claim 1, wherein the output combining element comprises control signals from one or more converters.
12. The equipment of claim 1, wherein first and second converters of one or more of the AC/DC converters and the DC/DC converters are in communication for purposes of load control.

13. A power system, comprising:  
an AC power source;  
a DC power source; and  
an equipment operable to receive and operate on power from both the  
5 AC and DC power sources.

14. The power system of claim 13, wherein the AC power source further comprises a plurality of AC power sources and the DC power source further comprises a plurality of DC power sources.

15. The power system of claim 13, wherein the equipment comprises:  
an AC distribution system which is operable to receive and distribute AC input power;  
a DC distribution system which is operable to receive and distribute DC  
5 input power;  
one or more AC/DC converters operable to receive AC input power from the AC distribution system and to produce one or more first DC outputs;  
one or more DC/DC converters operable to receive DC input power from the DC distribution system and to produce one or more second DC  
10 outputs;  
an output combining element operable to couple at least one of the one or more first DC outputs and the one or more second DC outputs to a load.

16. The power system of claim 13, further comprising a plurality of equipments accepting power from both the AC and DC power sources.

17. The power system of claim 13, wherein the AC and DC power sources further comprise conditioning.

18. A method of operating with dual input power sources, comprising:  
converting AC input power received by an equipment to one or more  
first DC converted voltages;  
converting DC input power received by the equipment to one or more  
second DC converted voltages; and  
combining the one or more first DC converted voltages and the one or  
more second DC converted voltages to derive one or more DC equipment  
voltages.
- 5
19. The method of claim 18, wherein said one or more first and second DC  
converted voltages are a voltage level and the one or more DC equipment  
voltages are derived from the voltage level.
20. The method of claim 18, wherein said first and second DC converted  
voltages comprise a first voltage level and a second voltage level and wherein  
the one or more DC equipment voltages are derived from the first and second  
voltage levels.
- 5
21. The method of claim 18, wherein said first and second DC converted  
voltages are a plurality of voltage levels and wherein the one or more DC  
equipment voltages are an equipment voltage level derived from the plurality  
of voltage levels.
- 5
22. The method of claim 18, further comprising prior to converting:  
distributing the AC input power received by the equipment; and  
distributing the DC input power received by the equipment.
23. A method of operating a system comprising a plurality of equipments  
operable from multiple input power sources, comprising:  
receiving one or more AC input power sources and one or more DC  
input power sources by the system;

5 for each equipment of one or more equipments of the plurality of equipments further comprising:

converting AC input power received by the equipment from the one or more AC input power sources to one or more first DC converted voltages;

10 converting DC input power received by the equipment from the one or more DC input power sources to one or more second DC converted voltages;

15 combining the one or more first DC converted voltages and the one or more second DC converted voltages to derive one or more DC equipment voltages.

24. The method of claim 23, wherein said one or more first and second DC converted voltages are a voltage level and the one or more DC equipment voltages are derived from the voltage level.

25. The method of claim 23, wherein said first and second DC converted voltages are a first voltage level and a second voltage level and wherein the one or more DC equipment voltages are derived from the first and second voltage levels.

5

26. The method of claim 23, wherein said first and second DC converted voltages are a plurality of voltage levels and wherein the one or more DC equipment voltages are an equipment voltage level derived from the plurality of voltage levels.

5

27. The method of claim 23, further comprising prior to converting:  
distributing the AC input power received by the equipment; and  
distributing the DC input power received by the equipment.

28. An equipment operable to receive and operate on AC and DC input power, comprising:

first means for distributing AC input power received by the equipment;

second means for distributing DC input power received by the  
5 equipment;

first means for converting the AC input power received from the first  
means for distributing to one or more first DC converted voltages;

second means for converting the DC input power received from the  
second means for distributing to one or more second DC converted voltages;

10           means for combining the one or more first DC converted voltages and  
the one or more second DC converted voltages to derive one or more DC  
equipment voltages.